

REMARKS/ARGUMENTS

Claims 8-13 are pending in this application. By this Amendment, Applicant amends Claims 8-13.

Claim 13 has been withdrawn from further consideration as being directed to a non-elected species. Applicant respectfully requests that the Examiner rejoin and allow Claim 13 when generic Claim 8 is allowed.

Claims 8-13 were objected to for allegedly containing minor informalities. Although Applicant disagrees with Examiner's allegations, in order to expedite prosecution of the present application, Applicant has amended claims 8-13 to correct the alleged minor informalities noted by the Examiner. Accordingly, Applicant respectfully requests reconsideration and withdrawal of this objection.

Claims 8-12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakatani et al. (U.S. 6,625,037) in view of Sugaya et al. (U.S. 6,931,725), and further in view of Sugaya et al. (US 2005/0186768). Applicant respectfully traverses the rejection of Claims 8-12.

Claim 8 recites:

A process for producing a component-embedded substrate, comprising steps of:

connecting and fixing a first electronic component to a first electrode pattern on a first supporting layer with a conductive bonding material;

press-bonding a second supporting layer including a second electrode pattern onto the electronic component-fixed surface of the first supporting layer with a first prepreg therebetween to perform transfer;

separating the first supporting layer and the second supporting layer from the first prepreg such that the first and second electrode patterns are disposed on a front surface and a back surface of the first prepreg;

curing the first prepreg before or after the step of separating the first supporting layer and the second supporting layer from the first prepreg;

connecting and fixing a second electronic component onto a

back surface of the second electrode pattern with a conductive bonding material after the step of curing the first prepreg;

press-bonding a third supporting layer including a third electrode pattern onto a second electronic component-fixed surface with a second prepreg therebetween to perform transfer;

separating the third supporting layer from the second prepreg; and

curing the second prepreg before or after the step of separating the third supporting layer from the second prepreg, wherein the prepreps and the electrode patterns are sequentially laminated. (emphasis added)

The Examiner alleged that the combination of Nakatani et al. and Sugaya et al. '725 teaches all of the features and method steps recited in Applicant's Claim 8, except for the step of "connecting and fixing a second electronic component onto a back surface of the second electrode pattern with a conductive bonding material **after the step of curing the first prepreg**" (emphasis added). The Examiner further alleged that Sugaya et al. '768 teaches "a transfer material capable of transferring a fine wiring pattern to a substrate reliably and easily. The transfer material includes at least three layers of a first metal layer as a carrier, a second metal layer that is transferred to the substrate as a wiring pattern, and a peel layer adhering the first and second metal layers releasably. On the surface portion of the first metal layer, a concave and convex portion corresponding to the wiring pattern is formed, and the peel layer and the second metal layer are formed on a region of the convex portion. Sugaya [et al. '768] teaches a curing method and discloses the individual curing method as widely known in the art."

Thus, the Examiner concluded that it would have been obvious "to combine the teachings of Nakatani and Sugaya [et al. '725] to enable the disclosed pattern transfer to be cured according to the teachings of Sugaya [et al. '768]. One of ordinary skill in the art would have had a reasonable expectation of success that the curing of Sugaya [et al. '768] would have produced a working device in view of the disclosure that the curing method is widely known in the art." Applicant respectfully disagrees.

Sugaya et al. '768 is merely directed to a multilayer wiring substrate. Sugaya et al. '768 fails to teach or suggest anything at all about connecting or fixing electronic

components on preregs or on wiring patterns disposed on preregs, or whether the connecting or fixing of an electronic component could or should be performed after curing of a prepreg. In fact, Sugaya et al. '768 does not even mention anything about a prepreg, much less curing of a prepreg. Thus, contrary to the Examiner's allegations, Sugaya et al. '768 certainly fails to teach or suggest the step of "connecting and fixing a second electronic component onto a back surface of the second electrode pattern with a conductive bonding material after the step of curing the first prepreg" as recited in Applicant's Claim 8.

The Examiner alleged that the reason for combining the alleged teachings of Sugaya et al. '768 with Nakatani et al. and Sugaya et al. '725 would have been "to enable the disclosed pattern transfer to be cured according to the teachings of Sugaya [et al. '768]." However, Applicant's Claim 8 does not recite any steps of curing a pattern transfer. Instead, as note above, Applicant's Claim 8 recites the step of "connecting and fixing a second electronic component onto a back surface of the second electrode pattern with a conductive bonding material after the step of curing the first prepreg." Thus, whether or not the alleged teachings of Sugaya et al. '768 would have enabled a pattern transfer to be cured is completely irrelevant to Applicant's Claim 8. Thus, the Examiner has clearly failed to establish a *prima facie* case of obviousness in the rejection of Applicant's Claim 8 under 35 U.S.C. § 103(a) as being unpatentable over Nakatani et al. in view of Sugaya et al. '725, and further in view of Sugaya et al. '786.

In addition, Nakatani et al. fails to cure the deficiencies of Sugaya et al. '725 as alleged by the Examiner. Particularly, as shown in Figs. 6(a) through 6(g) of Nakatani et al., the first prepreg 600 of Nakatani et al. (the lower sheet shown in Fig. 6(f)) includes only a first electrode pattern embedded in a lower surface of the first prepreg 600. The first prepreg 600 of Nakatani et al. does not include any second electrode pattern. Thus, Nakatani et al. clearly fails to teach or suggest the step of "press-bonding a second supporting layer including a second electrode pattern onto the electronic component-fixed surface of the first supporting layer with a first prepreg

therebetween to perform transfer” as recited in Applicant’s Claim 8.

Since Nakatani et al. fails to teach or suggest any second electrode pattern, Nakatani et al. certainly fails to teach or suggest the step of “connecting and fixing a second electronic component onto a back surface of the second electrode pattern with a conductive bonding material after the step of curing the first prepreg” as recited in Applicant’s Claim 8. Instead of being connected and fixed to a second electrode pattern of a first prepreg, the second electronic component 604 of Nakatani et al. is connected and fixed to a first electrode pattern embedded in the second prepreg 600 (the upper sheet shown in Fig. 6(f) of Nakatani et al.).

Applicant notes that the above arguments with respect to the failure of Nakatani et al. to cure the deficiencies of Sugaya et al. ‘725 were previously presented on pages 8 and 9 of the Amendment filed on February 14, 2008. However, in the outstanding Office Action, the Examiner failed to specifically address any of these arguments. Applicant respectfully requests that the Examiner specifically respond to these arguments in the next Office Action.

Accordingly, Applicant respectfully submits that Sugaya et al. ‘725, Nakatani et al., and Sugaya et al. ‘768, applied alone or in combination, fail to teach or suggest the unique combination and arrangement of features and method steps recited in Applicant’s Claim 8.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of Claim 8 under 35 U.S.C. § 103(a) as being unpatentable over Sugaya et al. in view of Nakatani et al.

In view of the foregoing amendments and remarks, Applicant respectfully submits that Claim 8 is allowable. Claims 9-12 depend upon Claim 8, and are therefore allowable for at least the reasons that Claim 8 is allowable. In addition, Applicant respectfully requests that the Examiner rejoin and allow non-elected Claim 13.

In view of the foregoing amendments and remarks, Applicant respectfully submits that this application is in condition for allowance. Favorable consideration and prompt

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allowance are solicited.

To the extent necessary, Applicant petitions the Commissioner for a One-Month Extension of Time, extending to October 24, 2008, the period for response to the Office Action dated June 24, 2008.

The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,

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